



Introducing the TS-x32XU: 10GbE-ready, entry-level rackmount NAS with an Alpine processor by Annapurna Labs



Live Broadcast Date:

APR 25, 2018

Live Broadcast Date:

6 p.m. (UTC+8)



QNAP

TS-x32XU

with AL-324 ARMv8 Cortex-A57 quad-core 64-bit 1.7 GHz processor

High-speed rackmount NAS for SMBs
with two 10GbE SFP+ ports & one PCIe slot for expansion

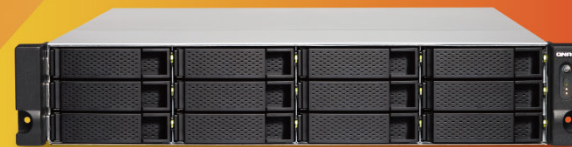
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an amazon company



TS-432XU/TS-432XU-RP



TS-832XU/TS-832XU-RP



TS-1232XU/TS-1232XU-RP

Most cost-effective 10GbE rackmount NAS

TS-432XU-2G

AL324, 2GB DDR4, single PSU

TS-432XU-RP-2G

AL324, 2GB DDR4, redundant PSU



TS-832XU-4G

AL324, 4GB DDR4, single PSU

TS-832XU-RP-4G

AL324, 4GB DDR4, redundant PSU



TS-1232XU-4G

AL324, 4GB DDR4, single PSU

TS-1232XU-RP-4G

AL324, 4GB DDR4, redundant PSU



ARMv8 Cortex-A57 quad-core 64-bit processor

Integrated I/O

10GbE, SATA 6Gbps, PCIe lanes in
27 x 27 mm BGA size

AARCH64 arch.

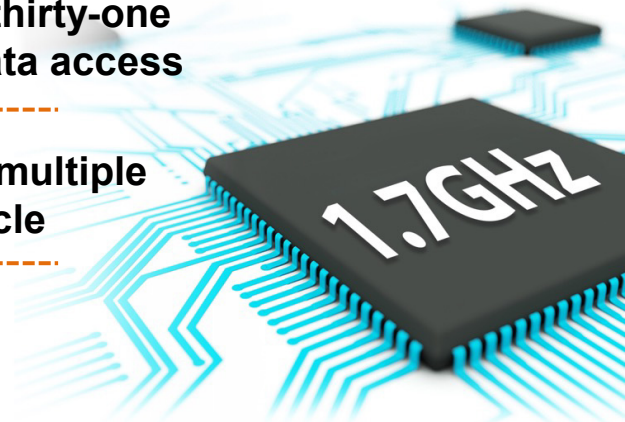
Newly designed 64-bit instruction set for
efficient computing and energy saving

Higher performance

Enhanced floating point operations and thirty-one
64-bit registers for reducing repetitive data access

Cryptography

Operates with 128 bit SIMD registers for multiple
encryption/decryption instruction per cycle



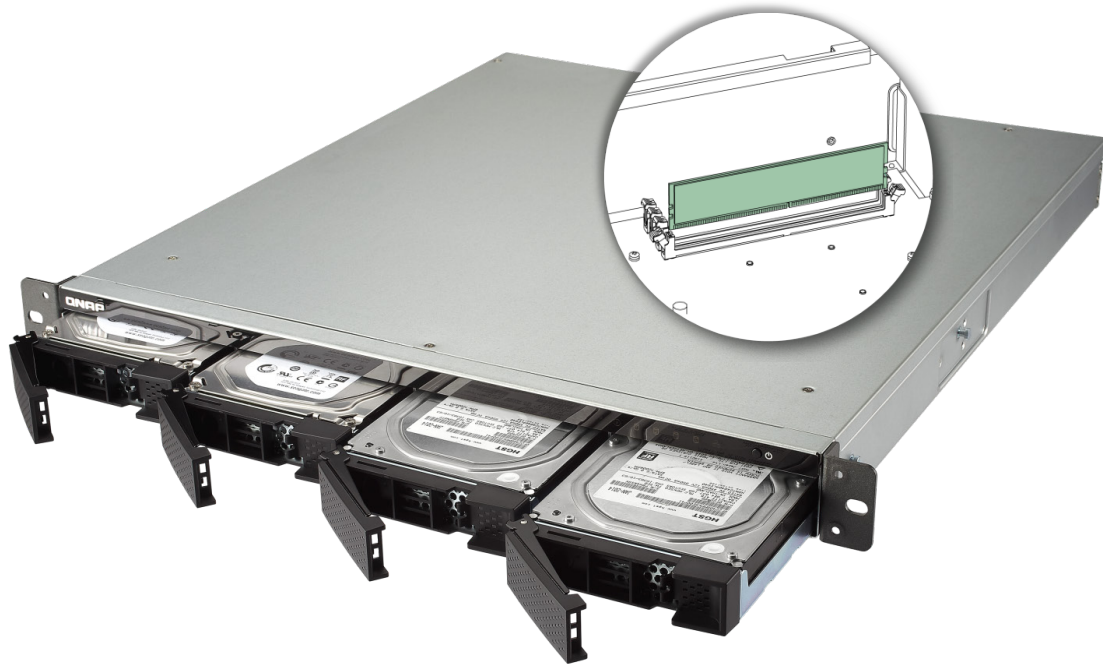
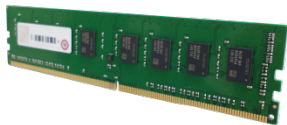
Up to 16GB DDR4 memory

1 x DDR4 UDIMM memory slot

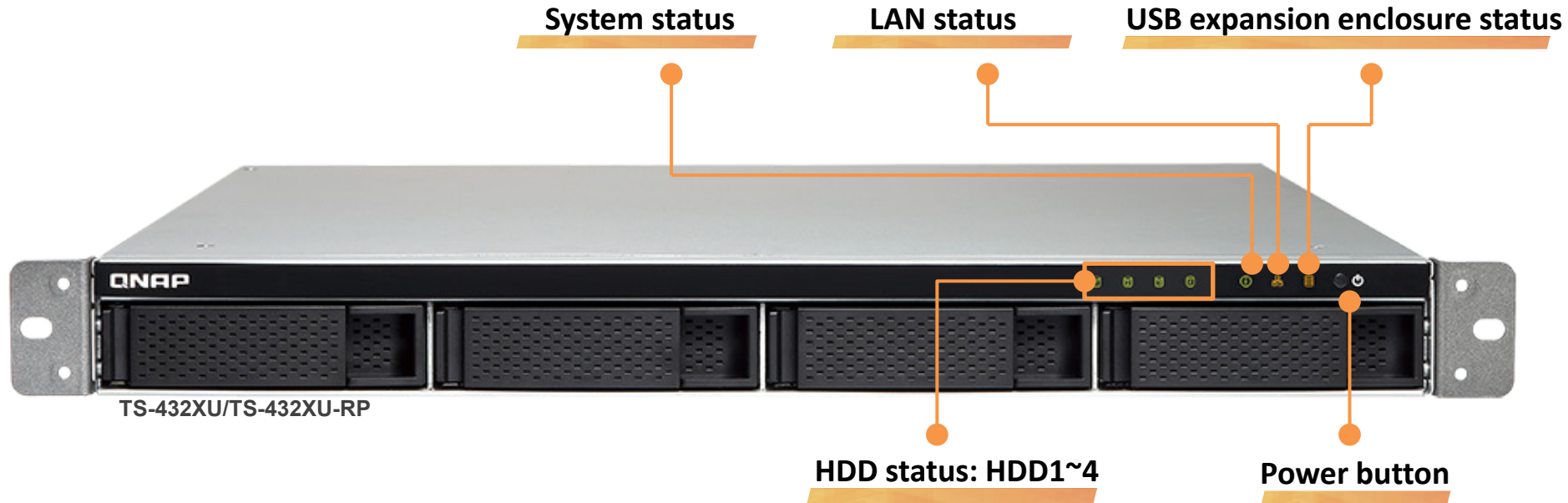
Upgradable to **16GB**

QNAP RAM accessories

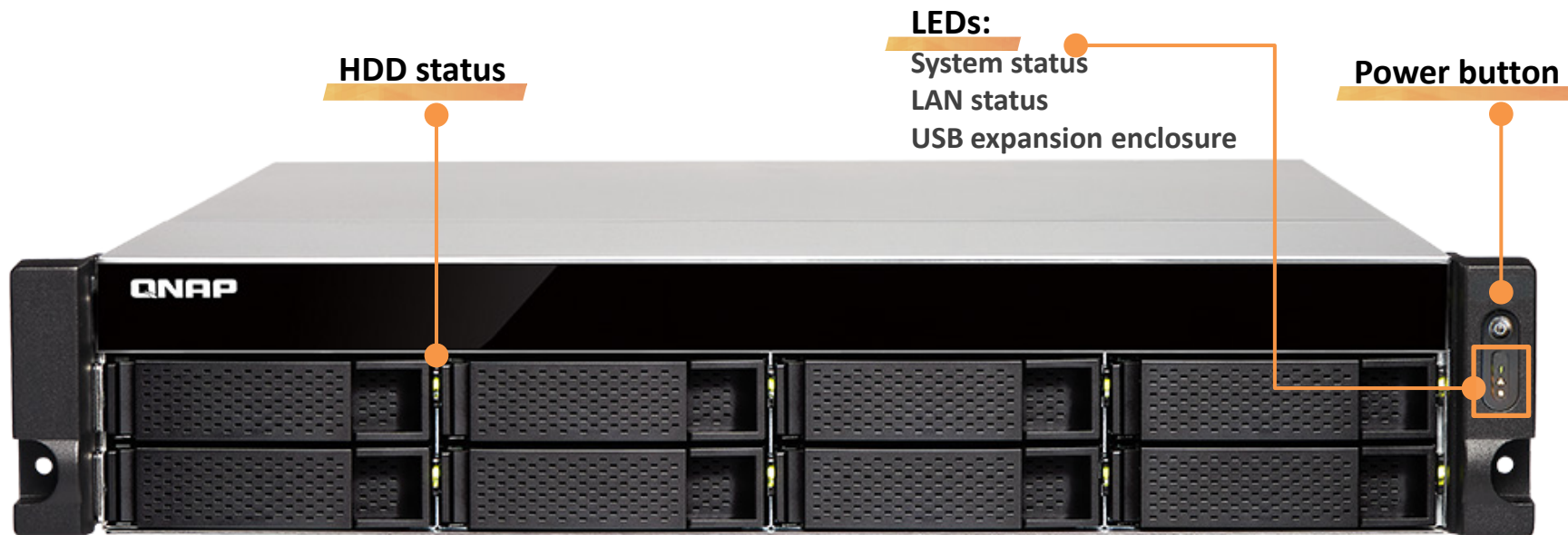
2GB, 4GB, 8GB and 16GB modules



TS-432XU front view



TS-832XU/TS-1232XU front view



TS-1232XU/TS-1232XU-RP



TS-832XU/TS-832XU-RP



TS-432XU rear view

2 x 10GbE SFP+ LAN ports

2 x 1GbE RJ-45 LAN ports

PCIe 2.0 x2 low-profile slot
(QNAP specialized bracket required)

250W power supply unit



TS-432XU



TS-432XU-RP

Reset

4 x USB 3.0
ports

250W redundant
power supply units

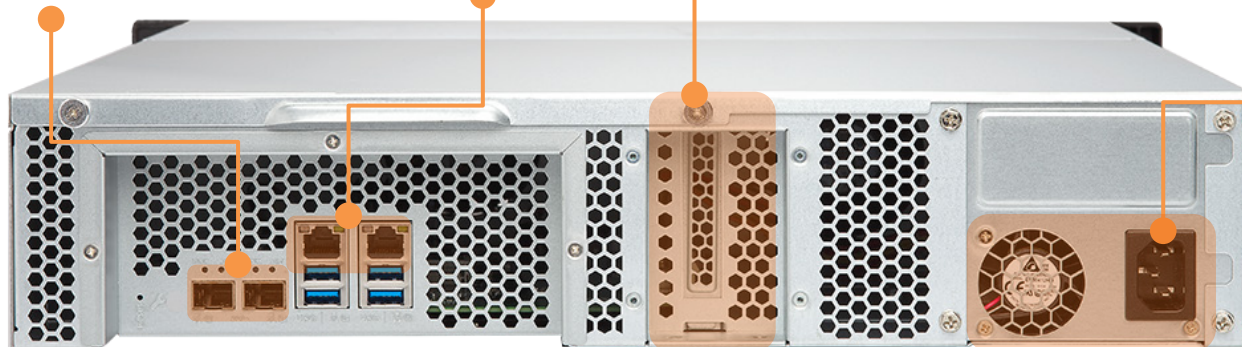
TS-832XU/TS-1232XU rear view

2 x 10GbE SFP+ ports

2 x 1GbE RJ-45 ports

PCIe 2.0 x2 low-profile slot

250W power supply unit



TS-832XU
TS-1232XU



250W redundant power
supply units

TS-832XU-RP
TS-1232XU-RP

Reset

4 x USB 3.0 ports

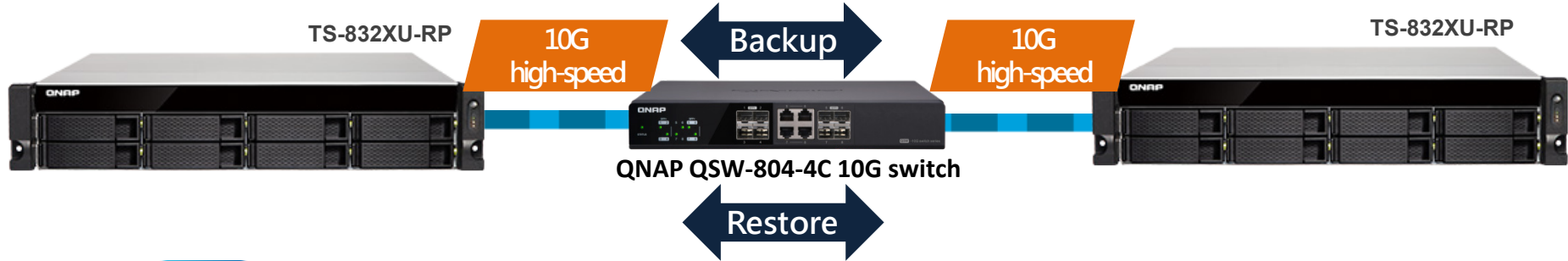
Two build-in 10GbE SFP+ ports

High-speed data
transmission

Fully support 10GbE high-speed networks, delivering a major speed increase for fast backup & restoration, large-data applications, and containerized application tasks

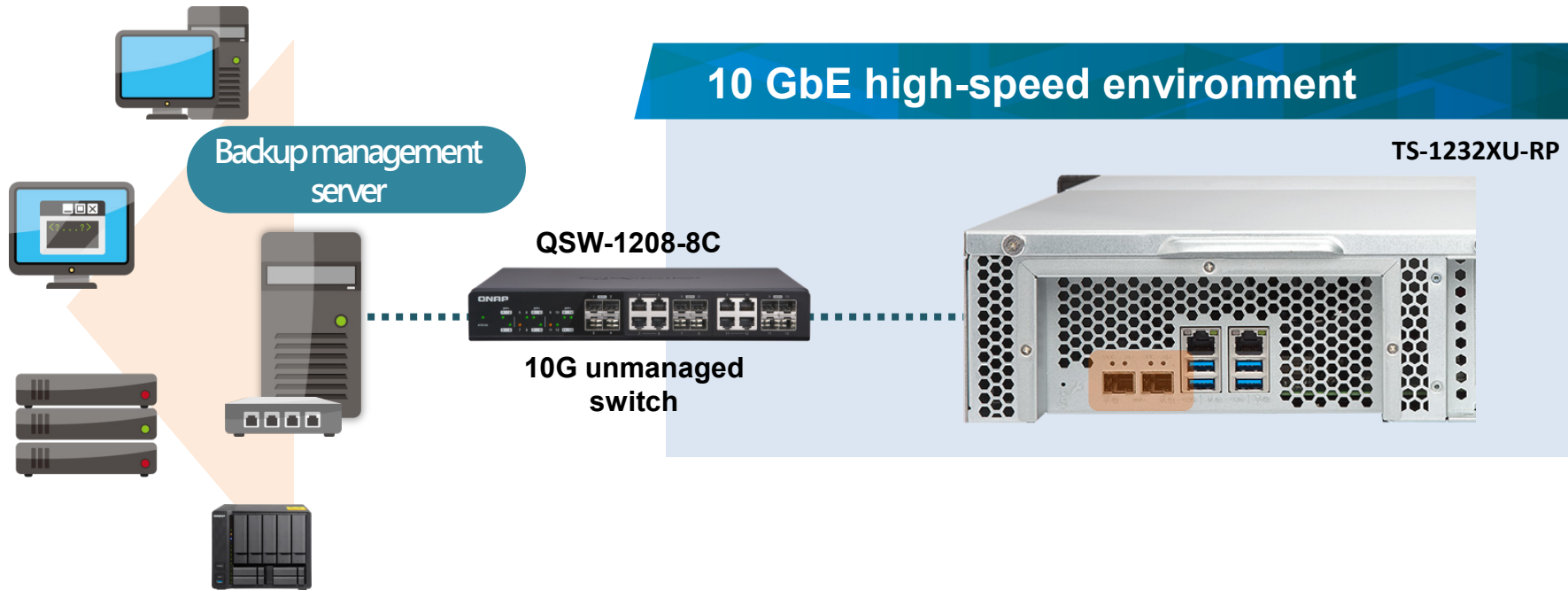


Faster data backup & recovery



10Gbps performance

Business-grade high-speed solution



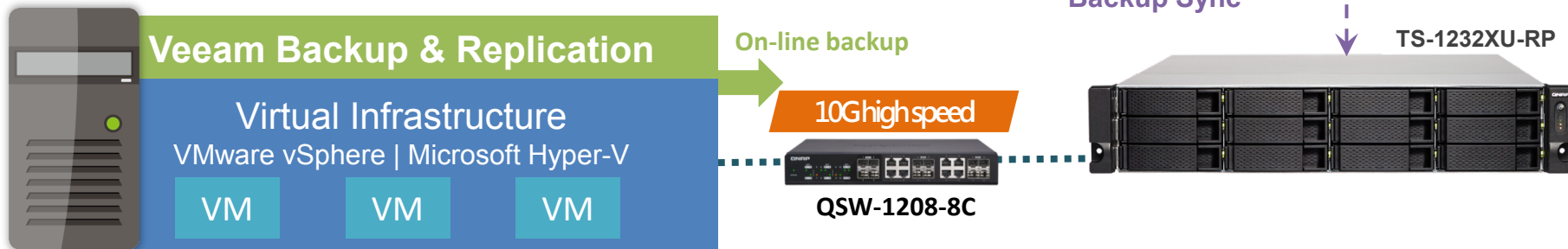
VM backup solution with Veeam

Veeam® Backup & Replication™ software

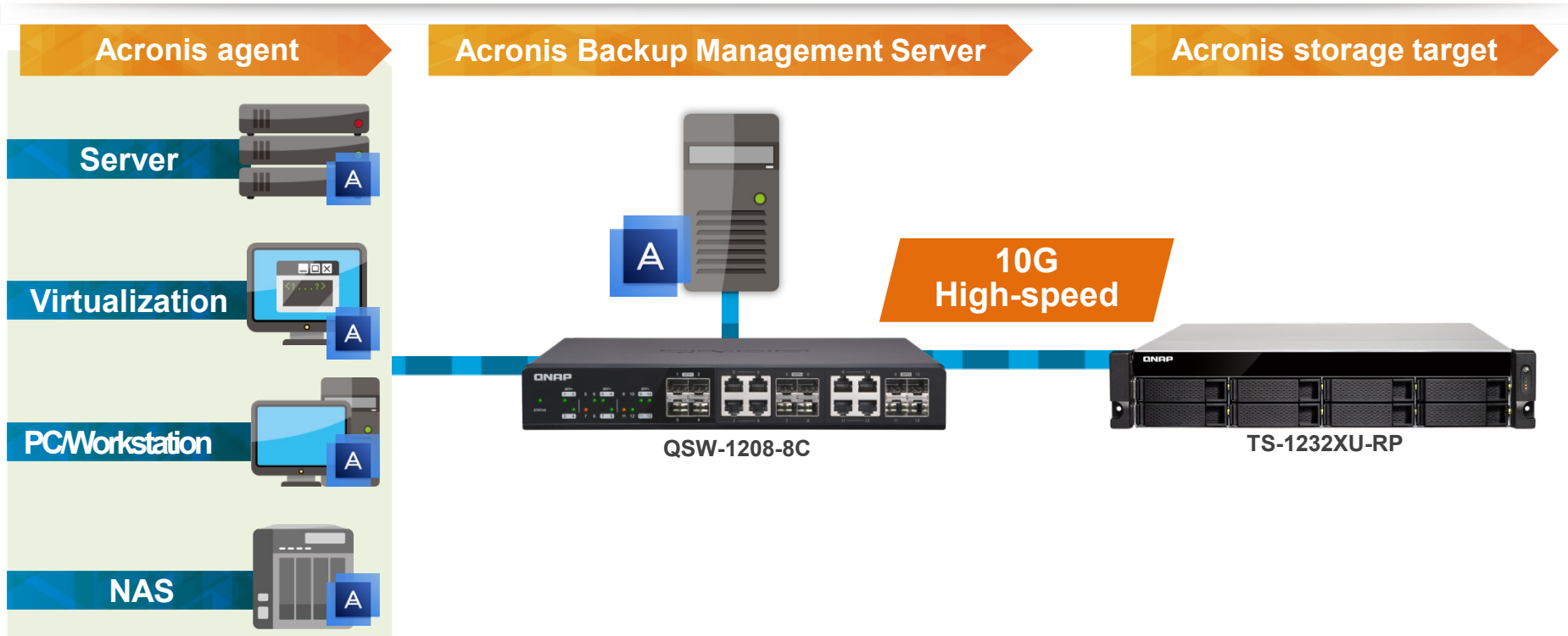
Provides a cost effective backup solution for VMware® and Hyper-V® that maximizes data reduction and scales

Equipped with dual 10G SFP+ ports: TS-x32XU NAS

High-speed 10G transmission to meet the needs of fast and in time demanding enterprise environments

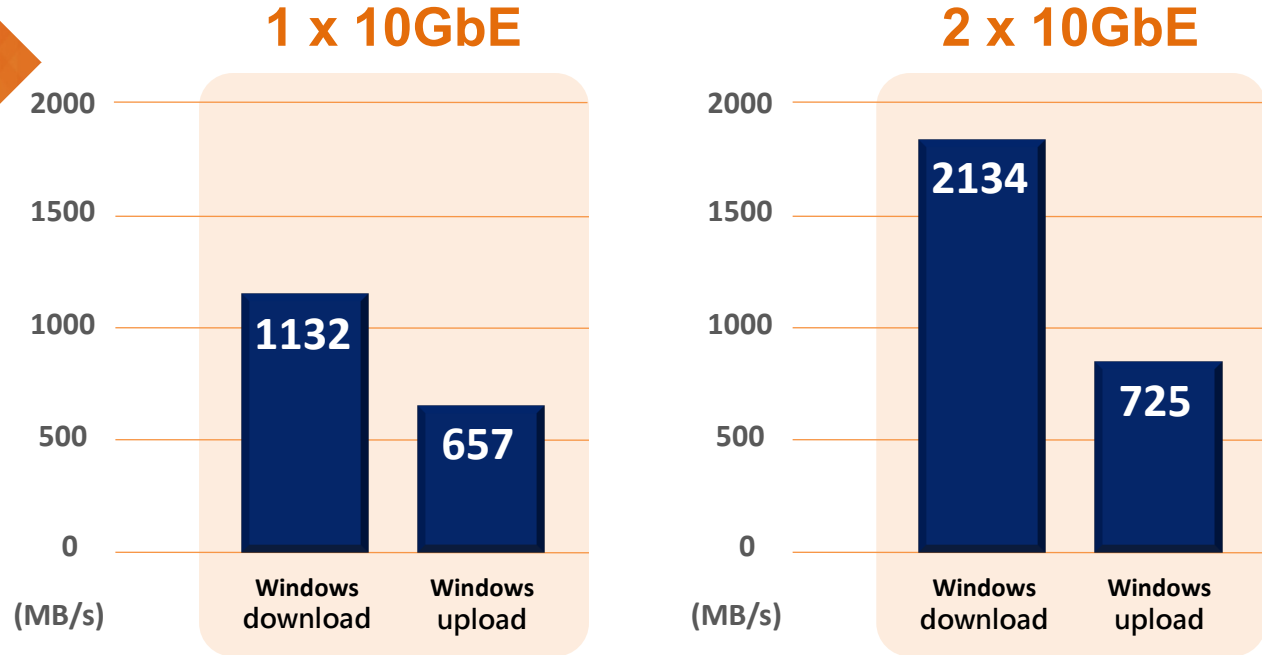


Acronis enterprise backup solution



All ready for 10GbE workloads

Windows File Transfer (10GB)



Tested in QNAP Labs, Figures may vary by environments.
NAS : TS-832XU (QTS 4.3.4)
Volume type: RAID5; 8 x Intel SSDSC2BB240G4 SSD

Client PC : Windows 10, Intel Core i7-6700 3.4 GHz, 32GB RAM, Mellanox ConnectX-3 NICs, Windows 10GbE Robocopy

QNAP

1 x 10GbE performance test

Demo



Flexible expandability with a PCIe slot

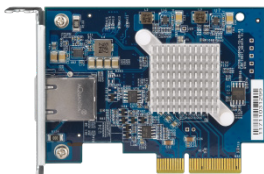
TS-x32XU is equipped with a low-profile PCIe 2.0 x2 slot for versatile functionality expansion

GbE port



LAN-1G2T-I210

10 GbE port



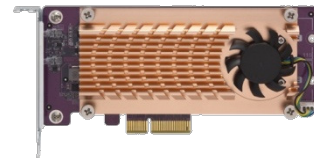
QXG-10G1T

USB 3.1 Gen 2



USB-U31A2P01

M.2 SSD



QM2-2S, QM2-2P,
QM2-2S-220A, QM2-2P-244A
QM2-2S10G1T, QM2-2P10G1T
QM2-4S-240, QM2-4P-284

Up to 10Gb/s theoretical speed

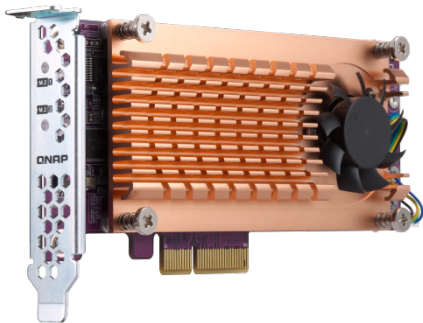
PCIe 2.0 x2



TS-832XU-RP

Deploy Qtier 2.0 with M.2 SSDs

RAID 0/1 M.2 SSD



QM2-2S, QM2-2P
QM2-2S-220A, QM2-2P-244A

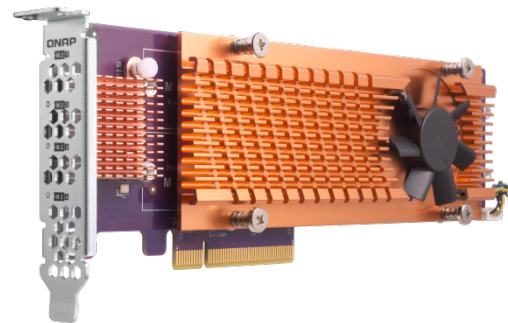
RAID 0/1 M.2 SSD/10GbE



10GbE
Combo

QM2-2S10G1T
QM2-2P10G1T

RAID 5/6/10 4 x M.2 SSD



Just 1 PCIe slot for adding
up to four M.2 SSDs

QM2-4S-240,
QM2-4P-284

Add SSD slots to NAS with a QM2 card

Without changing existing configuration

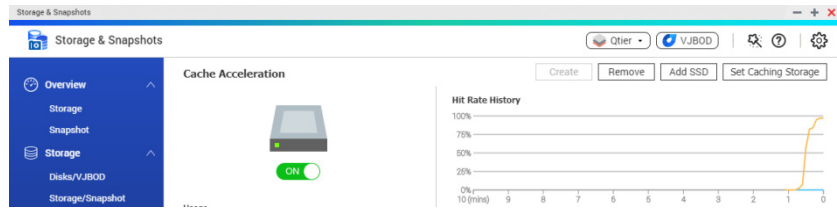


TS-432XU

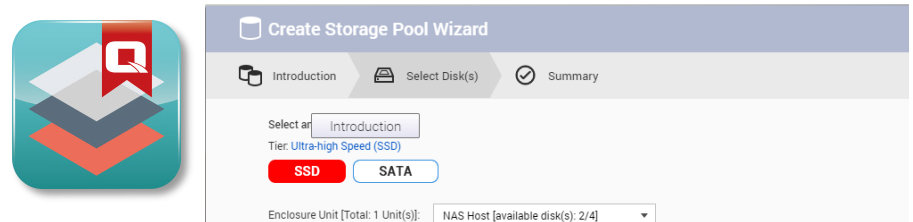


QM2-2S

SSD cache Accelerates random IOPs



SSD tier for Performance & Capacity

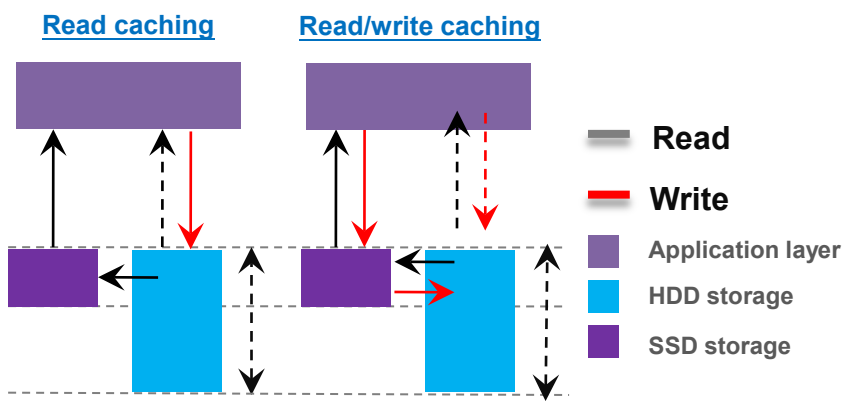


Upgrades a normal pool to **Qtier** without starting over

QTS supports M.2 SSD cache acceleration

Reduce I/O latency → Accelerates IOPs performance

Global read-write cache → Applies SSD cache to all volumes and LUNs with a single setup process, or specified volumes only



Storage & Snapshots

Cache Acceleration

Usage

Service: Enabled
Capacity: 108.64 GB
Cache Type: Read-Write
Cache RAID: RAID 1
Read Hit Rate: 0 %
Write Hit Rate: 97 %
Cache Flushing: --
Status: Ready

Hit Rate History

Name/Alias	Capacity	Status
DataVol1	245.44 GB	Ready
DataVol2	688.37 GB	Ready
DataVol3	688.37 GB	Ready
DataVol4	693.84 GB	Ready
DataVol5	688.37 GB	Ready
DataVol6	325.27 GB	Ready



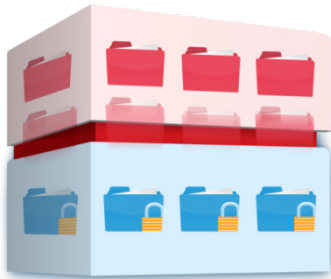
Use M.2 SSD as high-speed tier with Qtier 2.0

Storage and SSD caching

Keep flexibility for accelerating performance of key data and increasing cost efficiency

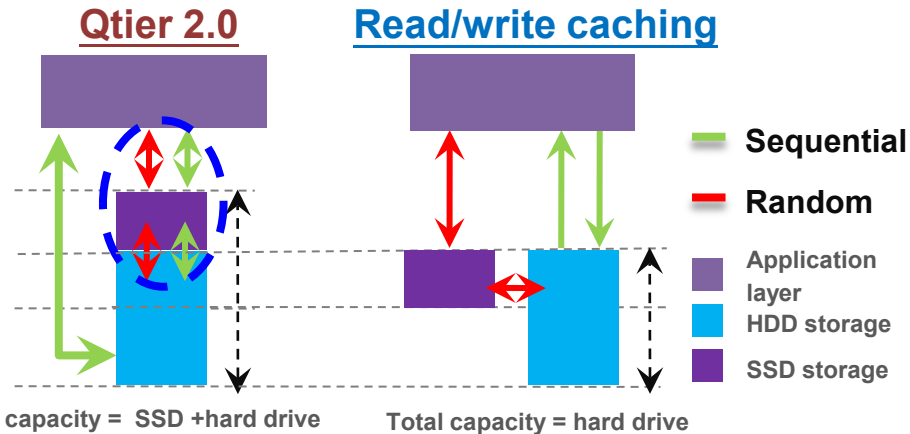
I/O aware

Tiering on Demand



Hot data & reserved block I/O

Cold data & Archived data



Maximum capacity with optimal performance

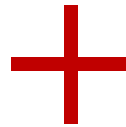


Enhanced sequential & random read/write performance

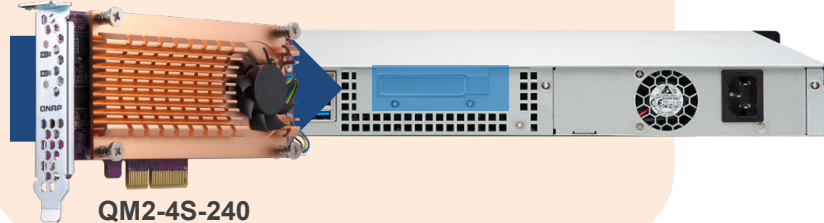
4 x 3.5-inch HDD for large capacity



TS-432XU-RP



Install a QM2 card with M.2 SSDs for Qtier



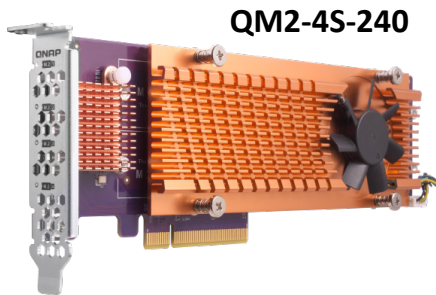
QM2-4S-240

Upgrade to Qtier for boosted performance

IOMeter Test (1 x 10GbE)

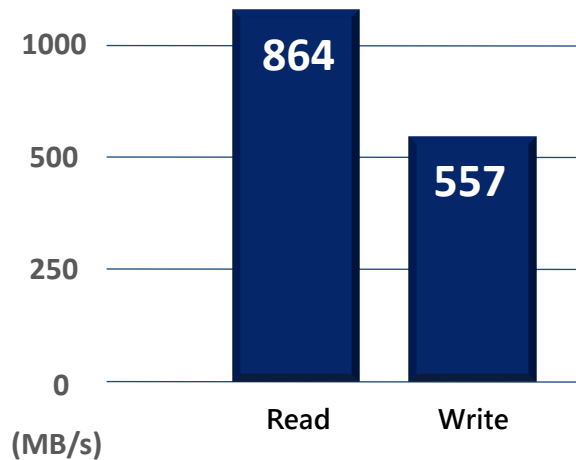


4 x HDD RAID 5



QM2-4S-240

4 x M.2 SSD RAID 5



Tested in QNAP Labs. Figures may vary by environment.
NAS: TS-432XU & QM2-4S-240 (QTS 4.3.4)
RAID 5; 8 x Seagate ST1000NM0008, 4 x Kingston M.2 SSD RBU-SN815S3256GG2

Client PC: Windows 10, Intel Core i7-6700 3.4 GHz, 32GB RAM, Mellanox ConnectX-3 NICs, Iometer

QNAP

Demo

1. Install a QM2-4S-240 card and enable Qtier
2. Qtier performance test



Snapshots: A modern way to protect your data

	2GB RAM	≥ 4GB RAM
For whole NAS	64	256
For a single volume/LUN	32	64

Block level

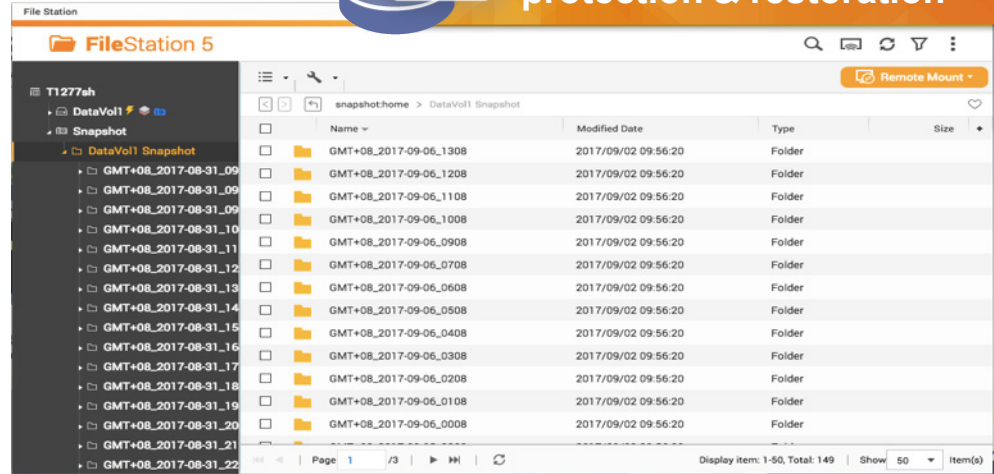
One click recovery

Snapshot Sync

Reserved space



Snapshots ensure data protection & restoration



Expand other NAS capacity with VJBOD



QVR Pro surveillance solution



5,000+ compatible IP cameras

8 free recording channels

16 maximum recording channels

USB webcam live view & recording with QUSBCam2

Expand TS-x32XU capacity flexibly



TS-832XU

Connected with QNAP expansion units



Up to 2 QNAP 12-bay
UX-1200U-RP or 8-bay **UX-800U-RP**
expansion units


UX-1200U-RP



UX-800U-RP



Cost-effective 10GbE rackmount NAS

	TS-x31XU	TS-x32XU 
Processor	Quad-core AL314	Quad-core AL324
CPU architecture	ARMv7 Cortex-A15 32bit	ARMv8 Cortex-A57 64bit
CPU frequency	Up to 1.7 GHz	1.7 GHz
Maximum memory	16 GB DDR3 SODIMM	16 GB DDR4 UDIMM
LAN port	2 x GbE & 2 x 10GbE SFP+	2 x GbE & 2 x 10GbE SFP+
PCIe slot	1 (2.0 x2)	1 (2.0 x2)
Qtier	-	v
Surveillance application	Surveillance Station	Surveillance Station & QVR Pro

QNAP

TS-x32XU Series

Two 10GbE SFP+ ports & one PCIe slot for expansion

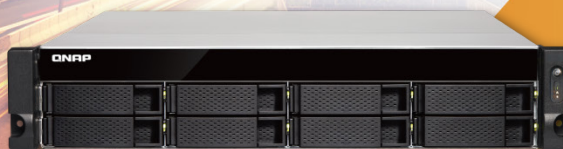
AL-324 ARMv8 Cortex-A57 quad-core 64-bit 1.7 GHz processor

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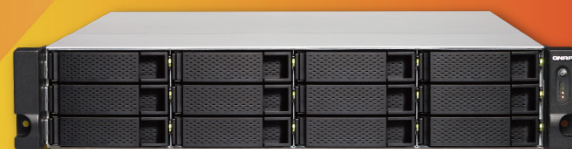
TS-432XU/TS-432XU-RP



TS-832XU/TS-832XU-RP



TS-1232XU/TS-1232XU-RP



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